Does Self-directedness in Learning and Careers Predict the Employability of Low-Qualified Employees?

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Does Self-directedness in Learning and Careers Predict the Employability of Low-Qualified Employees?

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Abstract Employability has become a key element in sustaining successful vocational careers. The role of self-directedness is considered paramount in maintaining one's employability. However, it also requires certain competences on part of employees to invest in learning and career development. This study examines the influence of self-directedness in learning and career of low-qualified employees on their employability. In a follow-up study of 284 low-qualified employees, we find that higher levels of self-directedness in learning and career of employees corresponds with higher chance to be promoted to higher-level job positions (vertical job mobility). However, no relationship was found between different formats of self-directedness and job retention or horizontal job mobility of lower qualified personnel.

Keywords Employability · Low-qualified employees · Self-directed learning · Career management · Job retention · Job mobility

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Introduction

Employee employment and career opportunities are largely determined by the socio-economic context in which the vocations are situated (Prince 2003). Lifetime employment has drastically lost ground. As argued by Kirpal (2004, p. 119) "employees in Europe are increasingly exposed to demands for flexibility and mobility at work and are challenged to deal with, and respond to, continuous changes in the work context". This has affected the characteristics of the employment relationship in a profound way, and consequently employee's preparation for the labor market (Prince 2003; Nauta et al. 2009). In order to guarantee their employability, employees have to invest continuously in their learning and development. The latter implies that employees need to become self-directed in choosing and developing career paths and in selecting successful routes in their lifelong learning (Arnold and Randall 2005; Abele and Wiese 2008). This is true for both high and low educated employees (Jones and Bergmann Lichtenstein 2000). Self-directedness in learning and career have become key competences for employees at all levels, regardless if they are knowledge or service workers (Drucker 1993).

However, research focusing on low-qualified employees (i.e. employees having no educational qualifications) would be of interest from various perspectives. Firstly, most employability studies to date focus on higher qualified employees (Forrier and Sels 2005; Long and Morris 1995). These studies show that self-directedness strengthens their labor market position. Due to volatile labor market conditions in which higher qualified applicants are willing to take up lower-qualified jobs, low-qualified employees experience an increasingly difficult situation to maintain their labor market position (Brown et al. 2003; Büchel et al. 2003). Secondly, access to employability improvement possibilities (i.e., through training and development) is unevenly distributed among high and low qualified workers and primarily favors those who possess prior qualifications. As warnings of impending labor and skill shortages have been made (Armstrong-Stassen and Schlosser 2008) employers need to realize that it is important to facilitate the learning and development of low-qualified employees.

The argument put forward in this paper is that deployment of competences for self-directedness is beneficial in acquiring and maintaining a job position. This paper analyses whether lower-qualified workers have better employability chances when they adopt a higher level of self-directedness in relation to their learning and career development. A further understanding of this relationship between self-directedness and employability could help to effectively manage the (competence) development of low-qualified workforce. Our research question therefore is: *Does Self-directedness in Learning and Careers Predict the Employability of Low-Qualified Employees?*

Conceptual Research Framework

Self Directedness and Employability

Few studies focus on the relationship between self-directedness (both of learning and in career) and employability (See King 2004; Seibert et al. 1999, 2001; Van Loo 2005). According to Hillage and Pollard (1998) and Brown et al. (2003) employability is the probability of a) acquiring initial employment, b) maintaining

employment and c) obtaining new employment (internal or external mobility). As we focus on lower qualified who are already employed, the first aspect, i.e., the finding of initial employment, is not taken into consideration. We distinguish between two dimensions in which a worker's employability can become manifest, i.e.:

(1) Job retention: the capability of maintaining employment and
(2) Job mobility: the capability of realizing horizontal or vertical mobility. Horizontal mobility refers to movement from one job position to another without altering occupational status. Vertical job mobility refers to movement from one job position to a higher one (upward mobility) or a lower one (downward mobility). These job shifts can be internal (same employer) or external (different employer).

The concept of self-directedness has mainly been studied in formal school-oriented contexts. There is a lack of empirical research pertaining to self-directed learning in working life. For this reason, we like to propose a distinction between self-directedness in learning and self-directedness in vocational career as both are positive determinants of a worker's employability (Marx et al. 2004). Self-directedness in learning refers to an orientation to *take an active and self-starting approach in work-related learning activities and situations, and to persist in overcoming barriers or setbacks to acquiring competence* (Raemdonck et al. 2008). Self-directedness in career however, places emphasis on the employee`s orientation to manage and advance current work conditions to promote career development such as networking, work exploration, self-presentation that facilitate the employee`s position on the labor market.

In their study on low versus high-qualified employees, Raemdonck et al. (2005) found that both types of self-directedness are interrelated but still can be considered as distinct orientations. This is in line with the study of Brockett and Hiemstra (1991) who stress that the concept of self-directedness in adult learning should not be limited to the concept of learning per se, but should also encompass the context in which this learning occurs, i.e., the career. This broader interpretation of the concept of self-directedness provides the span needed to develop a full picture of learning in vocations (Owen 2002). Following Raemdonck (2006) we interpret *'self-directedness in learning*' as an adaptive characteristic that helps the employee to cope with informal and formal work-related learning that result in the achievement of work-related goals, such as mastering new tasks or updating skills and knowledge. We define '*self-directedness in career*' as an adaptive characteristic that helps the employee to cope with and influence ones positions on the labor market resulting in the achievement of career-related goals such as an increase in rewards, horizontal or vertical job moves or a more favorable career prospect (see Van Loo 2005). Both types of self-directedness are believed to influence employability; implying that employees who take a self-directed approach towards their learning *and* career are expected to improve their employability chances (Raemdonck 2006), i.e. maintaining job retention or increasing job mobility (Sanders and De Grip 2004). With respect to job retention a study of Van Loo (2005), involving administration employees, shows that employees` investment in a vocational training to counter skills deficiencies raised their chance of remaining employed. Kuijpers (2003) also found that self-directedness in career contributes to job retention success. Based on

these findings, we assume that self-directedness in learning and career has positive effects on job retention. In addition we assume that self-directedness in learning and career are also advantageous for job mobility (Van der Heijde and Van der Heijden 2006). By the same argument, refraining from investing in learning and career activities decreases or jeopardizes ones chances of job mobility (De Grip et al. 2004). Employees who are not self-directed in learning run a higher risk that their knowledge and skills become obsolete. And those who are not self-directed in their career give a negative signal about their employability to current and future employers. Sanders and De Grip (2004) show that—among low-qualified employees—there is a clear effect of training participation on (internal) mobility. We build on these assumptions to hypothesize that self-directedness in learning and career will have a positive impact on horizontal and vertical job mobility.

Taking Contextual Factors and Employability Into Account

Both self-directedness in learning and career are situated in actual work settings in which not only individual orientations but also external conditions and processes play a role. Next to individual characteristics (referred to as *absolute* predictors by Brown et al. 2003), it needs to be recognized that also factors outside the employee impinge on job maintenance; such as their work environment, labor market conditions, and the general socio-economic employment context (*relative* predictors, according to Brown et al. 2003). In the present study, the employee`s perceived influence of labor market conditions on one's opportunities of job success, is taken into consideration. Also the industry sector, in which the employee is working, is taken into account. A study by De Grip et al. (2004) shows that the industry sector plays a role in the employability level of employees. Earlier research additionally pointed at age and sex as predictors of employability (Berntson et al. 2006; Vuori and Vesalainen 1999).

Figure 1 gives a graphical representation of the interrelations in our conceptual research framework.

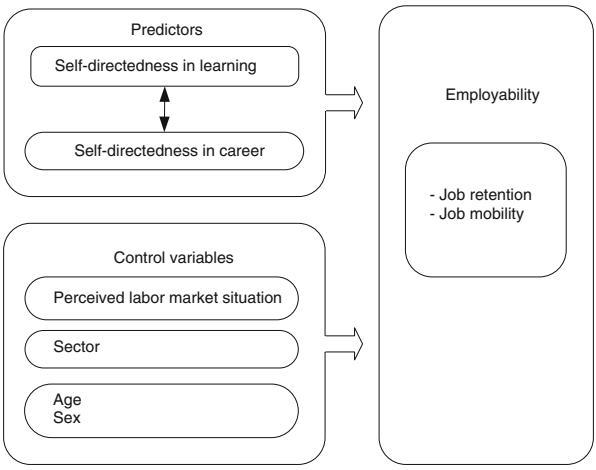

Fig. 1 Research model employability

Method

Sample and Procedure

A follow up research design with two measurement occasions was applied. During a first measurement occasion at time 0, data about the degree of self-directedness in learning and career of 408 low-qualified employed personnel from 35 companies located in Flanders were collected, together with data about the control variables (perceived labor market situation, industry sector, age, sex). One year later, at time 1, data about the dependent variables (job retention or change) was obtained to map changes in job position relative to the prediction variables (SDL and SDC). Respondents were contacted individually to be evaluated about two elements of their current employability situation (job retention and job mobility). A total of 348 respondents, who participated in the first part of the study, gave their consent to be contacted at time 1 (85% response rate). Finally, 248 of them (82%) effectively took part in the second measurement, by means of a telephone interview. Drop-out at time 0 was unsystematic and mainly due to scheduling problems, job shifts rotation, etc. (see below for an analysis of drop-out ratios). Industry sectors of the companies where respondents were employed pertained to the energy sector, the chemical industry and the food industry. Industry sector was determined on basis of the BELFIRST-database; a database containing information about companies located in Belgium. Reasons to select companies from these particular industry sectors are based on two motives: (1) the larger presence of low-qualified employees and (2) the level of investment in formal training. Companies with ≥20 employees—thereby avoiding small firms—and with the European Nomenclature of Economic activities (NACE-codes 15, 24, 40, 41) were contacted for participation. The majority were multinational companies. In each organization, at least 10 low-qualified employees were selected at random. Respondents participated voluntarily and needed to have at least 6 months of work experience in their company to be retained in the sample. 'Low-qualified' was defined as a person with no qualification of initial secondary education.

As we can expect response bias when issuing written questionnaires to low-qualified employees, it was decided to administer the questionnaires individually during work time. During the time 0 measurement, the questionnaire was read aloud to the employees to overcome problems with reading comprehension. During the time 1 measurement employees were interviewed by phone by a member of the research team. Interviewers were trained and followed a scripted protocol.

Respondents

The average age of respondents was about 39 years (SD=9.36) with an average year of work experience of 20 years and 48 months (SD=10.31). A majority of participants was male (66%) and of Belgian nationality (94.8%). The respondents carried out a variety of functions (operator, clerical worker, team leader etc.)

A systematic drop-out analysis was carried out in order to study potential bias influencing non-participation in the follow-up study. A series of t-tests was performed in order to determine whether there were differences (1) between the

subjects who were willing to cooperate for the follow-up study and those who were not willing to cooperate and (2) between those who actually cooperated and subjects who wanted to cooperate but could not be reached after being contacted.

Sample Characteristics

Four significant predictors were identified for willingness to cooperate in the follow-up study: lower scores on self-directedness in learning ($t=-2.29$, $p<.05$) and career ($t=-3.04$, $p<.01$). Also, employees working in the food industry were less likely to participate in the time 1-sample ($t=4.24$, $p<.001$). Participants working in the chemical industry were overrepresented in the follow-up study ($t=-3.71$, $p<.001$). No significant differences were found between subjects who were willing to be interviewed and actually were interviewed or between those who were willing to be interviewed but we were unable to reach by phone. The complete procedure was reviewed by an advisory ethics committee. Respondents gave their informed consent to their participation in the study.

Research Instruments

– Time 0: baseline measurement

Self-directedness in learning and self-directedness in career was measured by the SDL-scale and SDC-scale (Raemdonck 2006). Both scales measure an employee's perceptions about the extent to which they shape their own learning processes or career processes. Both scales consist of 14 items and reflect a one-dimensional structure. Each questionnaire item asks respondents (on a 5-point scale ranging from 1=strongly disagree to 5=strongly agree) to indicate to what extent the statement is applicable to them. An exemplary item is: 'Last year, I learned a lot of new things relevant for my job on my own initiative.' (SDL-scale) and 'I keep myself informed about new possibilities to develop my career.' (SDC-scale). The scales were piloted with a large group of low-qualified and high-qualified employees and showed high reliability and validity (Raemdonck 2006). In the present study the Cronbach's alpha for the SDL-scale was .81 and .88 for the SDC-scale. Confirmatory factor analysis, including the SDL-items and the SDC-items, was performed on the original scales, demonstrating that the items of both scales loaded on different factors (see Raemdonck 2006). The results of the CFA showed a good fit: $\chi^2=663.6$ ($df=349$, $\chi^2/df=1.90$, $p<.001$), CFI=.90, GFI=.89, AGFI=.87, and RMSEA=.048 (with a 90% interval of .043 and .054). Therefore, it was assumed that overlap between both types of self-directedness was limited.

Control Variables Perceived labor market condition was assessed with a nominal item having a 3-point range from 1=few work opportunities on the labor market to 3=many work opportunities on the labor market. The participants were asked to evaluate the availability of personal work opportunities in the labor market. As depicted in Fig. 1, we additionally controlled for the following antecedent variables: sector of industry (3 categories), age and sex.

– Time 1: measuring job retention and job mobility

Employability Employability was assessed 1 year after time 0, with an interview that focused on a number of objective employment measures (cf. De Grip et al. 2004). *Job retention* was measured by asking respondents whether they were still working within the same organization, or whether they left voluntary or not. Respondents were coded A for stayers, B for voluntary leavers and C for forced leavers. The second dimension, *job mobility*, was assessed by asking respondents whether there was any horizontal or vertical job change at time 1 with A for 'no job mobility', B for 'horizontal job mobility', and C for 'vertical job mobility'.

Data-Analysis

Research expectations were tested by carrying out multinomial logistic regression analyses. The effect of self-directedness in learning and career (predictors) was examined on the latent construct 'employability'. Since logistic regression is sensitive to multi-collinearity between criterion variables (see Peng et al. 2002), separate analyses were performed for self-directedness in learning and self-directedness in career. In both analyses, we controlled for the variables: perceived labor market situation, sector of industry (relative predictors), age and sex. Reporting and interpretation of the logistic regression results were based on Agresti (1996), Brace et al. (2003), Moore and McCabe (2006), and Peng et al. (2002).

Results

Table 1 summarizes the descriptive analysis results: means, standard deviations and zero-order correlations of the various variables. The table shows that there are significant correlations between predictive variables (self directedness variables) and the criterion variables 'job retention' and 'job mobility'. As expected, a significant correlation between self-directedness in learning and self-directedness in career (r=.62, p<.01) is found.

Self-Directedness and Job Retention

The logistic regression model with self-directedness in learning as the predictor variable and job retention as the criterion variable, is not significant (χ^2=5.54, df=8, p=.70). None of the independent variables significantly predicts the criterion variable (Table 2, model 1).

The model with self-directedness in career as the predictor variable and job retention as the criterion variable is also not significant (χ^2=6.78, df=8, p=.56). None of the independent variables significantly predicts the criterion variable (Table 2, model 2).

Self-Directedness and Job Mobility

Multinomial regressions are carried out with job mobility as the criterion variable. The model with self-directedness in learning as the predictor variable, is significant

Table 1 Correlations between variables in the study (N=284)

		Mean	*SD*	1	2	3	4a	4b	4c	5	6	7a	7b	7c	8a	8b	8c
1. SDL		3.71	.66	1	.62**	.16*	.15*	−.15*	−.02	.08	.09	.02	.00	−.03	−.14*	.11	.07
2. SDC		3.56	.90		1	.07	.20**	−.16**	−.08	−.009	−.06	−.04	.00	.05	−.08	.03	.10
3. Perceived labor market situation		2.42	.87			1	−.07	.04	.05	.13*	.00	.04	−.02	−.04	−.11	.01	.16
4. Sector:	a. Chemical industry						1	−.74**	−46**	.03	.05	−.01	−.05	.06	.10	−.12	.00
	b. Food Industry							1	−27**	−.16**	−.23**	−.06	.10	−.02	.02	−.03	.03
	c. Energy								1	.18**	.24**	.09	−.06	−.07	−.17**	.20**	−.05
5. Sex										1	.18**	.06	.07	−.15*	−.09	.08	.02
6. Age		39.10	9.36								1	.13*	−.10	−.07	.08	.02	.21**
7. Job retention:	a. Stayers											1	−.67**	−.72**	.10	−.17**	−.08
	b. Voluntary leavers												1	−.03	−.18**	.15*	.09
	c. Forced leavers													1	−.08	.09	−.01
8. Job mobility:	a. No job mobility														1	−.89**	−.31**
	b. Horizontal															1	−.16**
	c. Vertical																1

*p<.05, ** p<.01

Sex: 0=woman, 1=man; *SDL* self-directedness in learning; *SDC* self-directedness in one's career

Table 2 Results multinomial logistic regression 'self-directedness' as predictor of 'job retention' (N=284)

Predictor	β	SE	Wald χ^2	p	Odds Ratio
MODEL 1[a]					
Stayers[c]					
Self-directedness in learning	.018	.061	.088	p=.77	1.018
Intercept	.353	3.772	.009	p=.93	
Voluntary leavers					
Self-directedness in learning	.034	.075	.201	p=.65	1.034
Intercept	−1.960	4.669	.176	p=.68	
MODEL 2 [b]					
Stayers[c]					
Self-directedness in career	−.062	.054	1.305	p=.25	.940
Intercept	4.458	3.989	1.249	p=.26	
Voluntary leavers					
Self-directedness in career	−.057	.063	.844	p=.36	.944
Intercept	2.616	4.609	.322	p=.57	

NB Only the significant control variables are displayed in the tables

[a]Model Chi-Square=5.544, p=.70, −2 Log likelihood=.86.258., Nagelkerke R^2 =.071, Cox en Snell R^2 =.024

[b] Model Chi-Square=6.766, p=.56, −2 Log likelihood=.87.033, Nagelkerke R^2 =.085, Cox en Snell R^2 =.028

[c] 'Forced leavers' was randomly chosen as the reference category

(χ^2=34.80, df=14, p<.01). This model explains between 14.6% and 17.9% of the variance in job mobility. In this analysis, 'No job mobility' is used as the reference category. Table 3 summarizes the regression coefficients and the Wald statistics.

The tested model indicates that self-directedness in learning does not significantly predict 'horizontal job mobility' but significantly and positively contributes to the prediction of 'vertical job mobility'. The value of the coefficient reveals that an increase of one unit in the level of self-directedness in learning is associated with an increase in the odds of vertical job mobility by a factor of 1.09. As to the antecedent variables in the model, employees working in the chemical and food sector are less likely to be horizontally mobile. The odds of horizontal job mobility for working in the energy sector are four times higher than for working in the chemical industry or food industry. Furthermore, employee's age significantly predicts the probability of vertical job mobility (reference category 'no job mobility'). A higher age is associated with a considerably lower level of vertical mobility. Finally, the odds of realizing vertical job mobility are 3.9 times higher for employees who perceive more job opportunities as compared to employees who perceive moderate job opportunities. The tested model with self-directedness in career as predictor is significant (χ^2=30.82, df=14, p<.01). This model explains between 12.6% and 15.6% of the variance in job mobility ('No job mobility' is used as the reference category). The results are presented in Table 4

Self-directedness in career does not significantly contribute to the employees' 'horizontal job mobility' but significantly and positively predicted 'vertical job changes'. The coefficients reveal that a higher level of self-directedness in career is

Table 3 Results multinomial logistic regression with 'self-directedness in learning' as predictor of 'job mobility' (N=284)

Predictor	β	*SE*	Wald χ^2	p	Odds Ratio
Horizontal job mobility[a]					
Self-directedness in learning	.024	.018	1.826	p=.18	1.024
Sector [b]					
Chemical Industry	−1.382	.439	9.930	p<.01	.251
Food Industry	−1.384	.484	8.187	p<.01	.250
Intercept	.499	1.233	.164	p=.69	
Vertical job mobility					
Self-directedness in learning	.081	.041	3.849	p=.05	1.085
Age	−.154	.045	11.686	p<.01	.857
Perceived labor market situation [c]					
Few					
Moderate	−1,364	.701	3.783	p=.05	.256
Intercept	−.035	2.824	.000	p=.99	

NB: Only the significant control variables are presented in the table

The reference category of the categorical variables are respectively [a] 'no job mobility', [b] energy sector, [c] many work opportunities on the labor market'

Model Chi-Square=34.796, p<.01, −2 Log likelihood=333.494, p=.708, Nagelkerke R^2 =.179, Cox en Snell R^2 =.146

associated with higher odds of vertical job mobility by a factor of 1.06. Those working in the chemical or food sector are less likely to be horizontally mobile ('No

Table 4 Results multinomial logistic regression with 'self-directedness in career' as predictor of 'job mobility' (N=284)

Predictor	β	*SE*	Wald χ^2	p	Odds Ratio
Horizontal job mobility[a]					
Self-directedness in career	.005	.012	.174	p=.68	1.005
Sector [b]					
Chemical Industry	−1.154	.422	7.458	p<.01	.315
Food Industry	−1.137	.463	6.028	p<.05	.321
Intercept	1.193	1.050	1.290	p=.26	
Vertical job mobility					
Self-directedness in career	.053	.028	3.571	p=.05	1.055
Age	−.139	.043	10.428	p=.001	.870
Intercept	1.024	2.350	.190	p=.66	

NB: Only the significant control variables are presented in the table

The reference category of the categorical variables are respectively [a] 'no job mobility', [b] 'energy sector'

Model Chi-Square=30.815, p<.01, −2 Log likelihood=345.608, p=.708, Nagelkerke R^2 =.156, Cox en Snell R^2 =.126

job mobility' is used as the reference category). The odds of horizontal job mobility in the energy sector are 3.2 times higher as compared to the chemical industry and 3.1 times higher than in the food industry. The probability of realizing vertical job mobility is significant for age ('No job mobility' is used as the reference category). An increase of 1 year in age is associated with a decrease in the odds of vertical job mobility by a factor of 0.86.

Discussion

This study has examined the relationship between self-directedness in learning/career and the employability of low-qualified employees working in different industry sectors. We expected that employees with higher levels of self-directedness in their learning and in their career are more capable of (1) maintaining their job and (2) realizing job mobility. Our research findings provide moderate and partial evidence to support the link between self-directedness in learning and career, and employability. However, the relationship between self-directedness in learning and career, and job retention was not confirmed by our findings. This finding differs from the findings in Van Loo (2005) who found that self-directedness in learning, increases the chances for job retention for the administrative staff that he analyzed. This can be explained by the fact that almost all low-qualified employees in our study were able to maintain their job employment within the same organization. An alternative explanation is that most respondents had a high job security level, because 94% of the respondents had a permanent contract in a labor market that was booming when the survey was set up. Next, sample differences were found between those employees who were willing to cooperate for the follow-up study and those who were not willing to cooperate. Those employees who were less self-directed were less likely to participate in the time 1 study. This can cause potential bias.

As for job mobility, a high level of self-directedness in learning and in career did not affect employees` chances for horizontal job mobility. Similar results were reported by Van Loo (2005) among administrative staff in relation to the impact of their self-directedness in career. Our findings indicate, however, that higher levels of self-directedness in learning and career predict higher chances for vertical job mobility. These results are in line with longitudinal research findings from Kohn and Schooler (1982) who demonstrated that a self-directed orientation leads—over time—to vertical job mobility. We conclude therefore that opportunities for vertical job mobility are more affected by self-directedness in learning and career than opportunities for horizontal job mobility. Instead, other factors such as the sector of industry in which the employee is employed appear to affect the opportunities for horizontal mobility. The latter is reflected in our findings that show how the chance for horizontal job mobility is higher for employees in the energy sector than for those employed in the chemical or food industry. These higher chances for horizontal mobility in the energy sector might be an effect of the liberalization process in the Flemish energy sector which caused job losses and relocation of personnel at a horizontal job level (Nevala 2007). Evidence from research carried out by Ecotec (Nevala 2007) shows that in some other EU countries there is less evidence of efforts to achieve redeployment and retraining. Especially in countries where competition in the energy sector has

developed rapidly, the liberalization process mostly resulted in job losses and outsourcing of low-qualified individuals instead of relocation.

Our findings further indicated a strong impact of age on employability. Increased age decreases the chances of vertical job mobility. These results are in line with Sanders and De Grip (2004). An explanation for this significant relationship is that the 'human capital' of older workers is more organization-specific which make them less employable for the external labor market. A second explanation is that employers do have preferences for younger employees in making decisions related to career development as studies indicate that in most of the OECD countries the employment prospects and career opportunities of older workers are generally weak (see Armstrong-Stassen and Schlosser 2008).

Our findings show that different indicators of employability are linked to different predictors. Self-directedness contributes to an employee's upward mobility and thus can make a lower qualified employee more employable. However, those who are highly self-directed do not have higher chances of maintaining their job or of moving to other related positions (horizontal mobility). This shows that workers' employability is a complex concept. It is therefore not surprising that its definition and operationalization varies between studies and that the use of standards and indicators differs depending on the type of employee being studied (see Pollet et al. 2000). This brings us back to the key characteristics of our study in which we focused on lower qualified employees. One needs to be cautious when generalizing the findings of the present study, when discussing the employability of other types of—for instance high-qualified—employees (see Judge, Cable, Boudreau and Bretz 1995).

Although we do find an impact of self directedness in learning and career on vertical job mobility, its predictive power is rather low. It should be noted that a one-year time interval is relatively small and may have underscored lasting or varying changes in employability. Furthermore, a more in-depth analysis would be needed of the impact of self-directedness on lower qualified workers in different stages of the business cycle (periods of growth and decline). Another caution is that our main variables self-directedness in learning and career are posited at the individual level. Predictors of employability can be designated to other variables such as the culture within an organization. Our analysis results also show that workers' age is a major determinant of the employability of low-qualified employees. Obviously, this requires further research in aging societies where workers have to postpone their retirement because of the rising costs of the expanding retiring population. This raises the question to what extent self-directedness in learning and career at a younger or middle age positively affects workers' employability at an older age.

Practical Implications

The results of our study indicate that for low-qualified employees, stimulating vertical mobility asks for investment and support of self-direction in learning and in career. This is an interesting although challenging result for organizations and for the labor market as a whole. It is clear that within an increasingly dynamic labor market (e.g. continuous innovations in products and work processes, closing down of companies or companies moving their business to other countries, etc.) flexibility is not only requested from high-qualified employees but also from the large group of low-qualified employees (Arnold

and Randall 2005). This implies HR policies and strategies to change focus from high-qualified employees, the so-called talented professionals, to low-qualified employees. According to Prince (2003) it is most likely that there is a different psychological contract with respect to upward mobility towards low-qualified employees. The core question is how to support vertical mobility of these low-qualified employees. Our results refer to the role of self-directedness in learning and self-directedness in career. A clear focus in human resource development approaches on the connection between self-directedness in learning and job positions for low-qualified employees may act as a way to perceive learning activities as part of and directly relevant to job experience and career development (Berings, Poell and Simons 2005). Concretely, this implies the need for HR-practices where low-qualified employees' initiatives to undertake learning activities and plan future career steps are on the agenda in an explicit way and on a regular basis. In this respect, the use of personal development plans as HR tools is promoted (Beausaert, Segers, Van der Rijt and Gijselaers 2011). These types of tools, although mostly used at the middle- and top management level in organizations, can also serve an important role in supporting low-qualified employees' development and in turn in enhancing job mobility. Although personal development plans are powerful tools, various factors inhibit an effective implementation: prevailing work regulations, work conditions, and a lack of suitable teaching materials and training facilities. This implies that implementing a HR-tool to foster self-directedness is not sufficient. It is only effective when it is part of a consistent HR-policy.

As stressed before, self-directedness in learning and career are adaptive characteristics, implying development is possible. More aligned training and development strategies are needed (Poell et al. 2004). In this respect prior research in vocational educational settings offers valid suggestions (Boekaerts 1999; Boekaerts and Minnaert 1999) such as direct instruction, modeling and the provision of feedback on whether or not employees` choice of regulation strategies is in accordance with their capacity to steer and direct their learning and career. Moreover, with adequate facilitation it is supposed that employers can provide lower qualified personnel with the opportunities to take control over their own learning and development and to furnish them with suitable learning environments that promote self direction and autonomy (Deci et al. 1996).

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